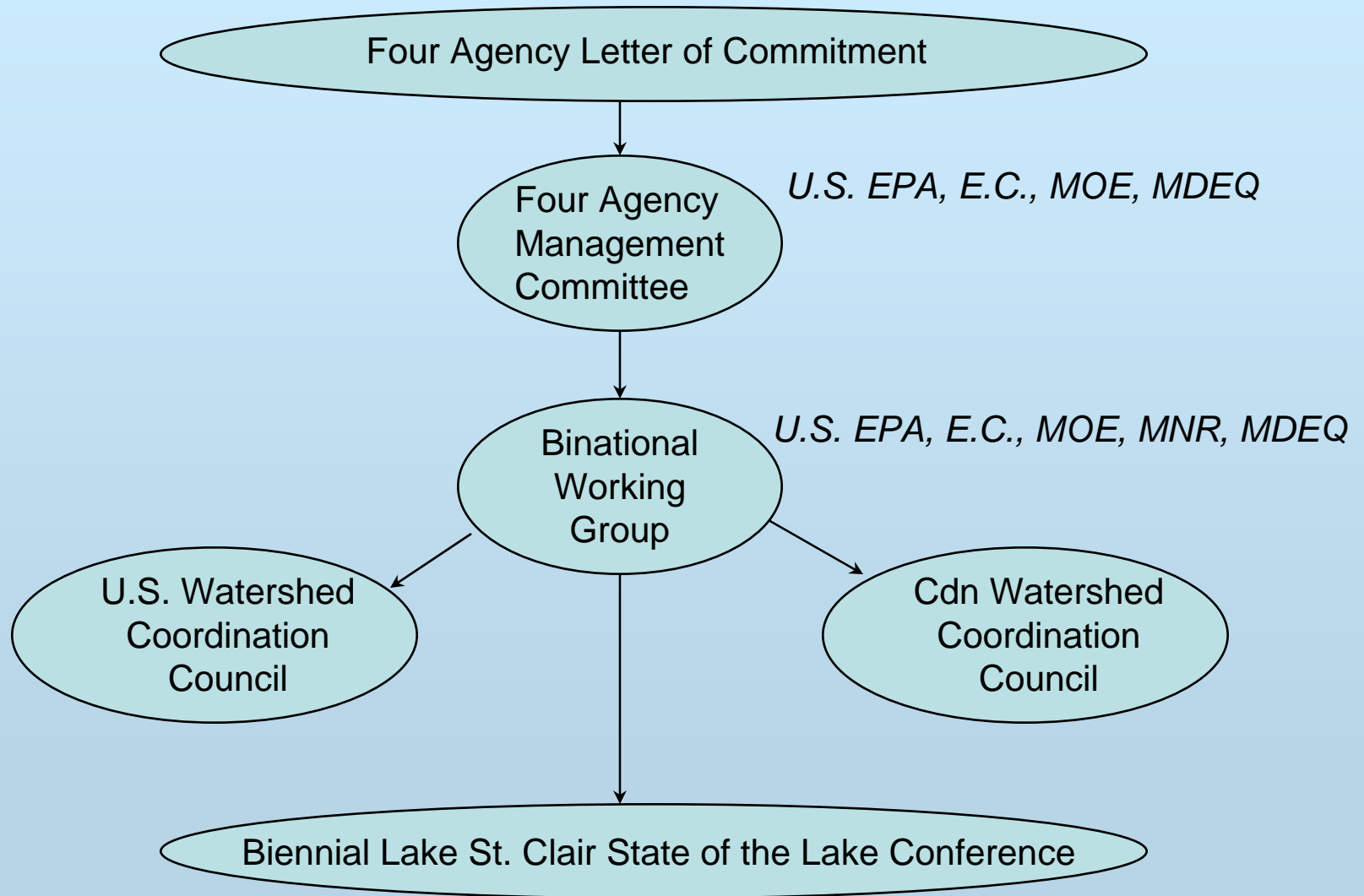



Lake St. Clair Canadian Watershed Management Plan

Lake St. Clair Biennial Conference
March 18-19, 2006

Presented by:
Jennifer Vincent, Environment Canada

Lake St. Clair Management Framework



The logo for the Cdn Watershed Coordination Council is a light green oval with a black border. Inside the oval, the text "Cdn Watershed Coordination Council" is written in black, centered and stacked in three lines.

Cdn Watershed
Coordination
Council

Membership:

Technical Representation from:

Environment Canada – Co-chair

Ontario Ministry of Environment – Co-chair

Fisheries and Oceans Canada – Fish Habitat
Management

Fisheries and Oceans Canada – Canadian
Coast Guard

Walpole Island First Nation

Ontario Ministry of Natural Resources

Ontario Ministry of Agriculture and Food

St. Clair Region Conservation Authority

Lower Thames Valley Conservation Authority

Upper Thames River Conservation Authority

Essex Region Conservation Authority



Purpose:

To function at the technical level as the focal point for discussion and coordination between Federal, Provincial, and local organizations to link respective programs/projects to Lake St. Clair watershed efforts.

To inform responsible authorities (i.e. governments) of policy & program priorities, and science & monitoring needs.

Where does the Cdn Plan fit?



Lake St. Clair Canadian Watershed Management

Lake St. Clair – St. Clair River
Binational Management Plan
(2004)

← Strategic overview
document

Lake St. Clair Canadian Watershed
Technical Report (2004)

← More detailed examination
of existing conditions and
programs. Identifies Cdn
management issues

Lake St. Clair Canadian Watershed
Management Plan (2008)

← Recommendations to
remediate Cdn management
issues and achieve LSC
vision

Lake St. Clair Canadian Watershed
Implementation Plan (2009)

← To be developed over the
next year.

Lake St. Clair stats...

Surface = 1,115 km² (430 mi²)

Shoreline = 272 km (169 mi)
+ delta shoreline

Mean depth = 3.0 m (12 ft)

Max. natural depth = 6.5 m (21 ft)

Shipping channel = 8.0 m (26 ft)

Cdn watershed = 77% (13,500
km²)



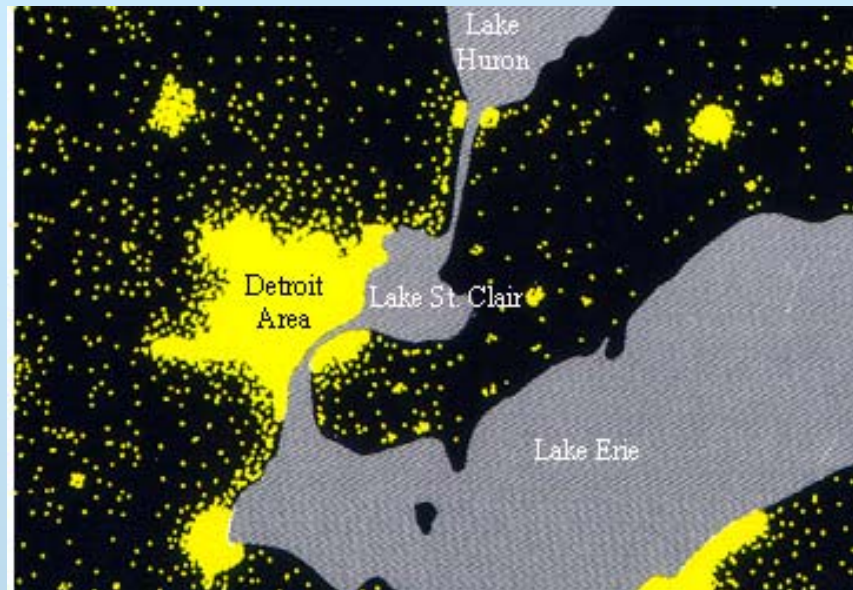
Land Use

CANADA

- **Population:** approx. 750,000
- **Use:** 75% farmland, 13% urban; 12% natural
- **Growth (1996-2001):** -1.8% - 3.5%

U.S.

- **Population:** < 6 million
- **Use:** 32% farmland, 37% urban; 31% natural/other
- **Growth (1990-1999):** -2.5% - 11.1%



Stressor: Recreational Boating

Use:

- 211 U.S. and 13 Cdn. Marinas

Impacts:

- **Habitat:** Altered shorelines to provide access and reduce erosion. Boats accessing sensitive habitats @ critical times.
- **Pollutants:** 2-stroke engines release 125 times more unburned hydrocarbons than a small van.



Stressor: Commercial Navigation

Use:

- 6,262 up-bound and down-bound trips in 2000. Ships transporting between 61 and 71 million tonnes/year.

Impact:

- **Habitat:** Shipping channel construction and on-going dredging maintenance.
- **Invasive Species:** Unintentional exotic species introductions (eg.: zebra mussel, round goby)
- **Pollutants:** Threat of accident resulting in chemical spill



Stressor: Invasive Exotic Species

Early Introductions

- Carp, sea lamprey, alewife, white perch
- Purple loosestrife, Eurasian water milfoil

Recent Introductions

- zebra and quagga mussels, round goby, spiny water flea

Future Introductions

- Asian carp, European ruffe, fish hook flea (?)



Effect: Chemical Contamination

- Concentrations and loadings of contaminants from point sources have been decreasing as a result of regulatory and voluntary efforts of government and industry.
- Out of basin sources of pollution are affecting the Lake St. Clair.
- Impairments still occurring such as restrictions on fish consumption, the closure of drinking water intakes.



Effect: Nutrient Pollution

- Non-point sources of pollution are having a significant impact on the Lake St. Clair ecosystem.
- Largest non point sources are from the tributaries ie. Sydenham and Thames Rivers.
- Pollutants include: suspended sediments, nutrients (Nitrogen & Phosphorus), bacteria
- Best Management Programs are ongoing however increases in concentrations of nutrients and bacteria are still occurring.



Effect: Habitat Loss & Fragmentation

- Lake St. Clair's habitats are ecologically, economically, and socially important.
- Loss and disturbance of habitats are an issue
- Invasive exotic species are irreversibly altering the ecology of the Lake.
- Major stressors include: land use, altered hydrology (surface water, groundwater, and lake levels), recreational boating, and chemical spills.



Effect: Species in Peril

- 29 endangered species, 25 threatened species, and 34 special concern species (COSEWIC May 2003)
- 157 species of birds recorded breeding in the Canadian watershed (Cadman 1987)
- 70 species of fish; 34 species spawn in lake.
- 36 species of mammals recorded in the watershed
- Migratory staging areas for: Mallards, Black Duck, Canada Geese, Tundra Swans, Canvasback and Redhead ducks.



Management Recommendations

- Communication
- Scientific research, monitoring & reporting
- Continued resource allocations
- New resource allocations
- Governance



Cdn Watershed Implementation

Focus of the Canadian Breakout session tomorrow.....

Release of Implementation Plan – 2009

Goal: Agency commitment to implement recommendations of the Management Plan